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THE

ONTARIO WATER RESOURCES

COMMISSION

WATER POLLUTION SURVEY

OF THE

TOWNSHIP OF BUCKE

DISTRICT OF TIMISKAMING

1964

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380  
.B83  
1964  
MOE.

STANDARDS DEVELOPMENT BRANCH OMOE  
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TOWNSHIP OF BUCKE - 1964

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TD  
380  
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1964

Report on water pollution  
survey of the township of Bucke  
80784

REPORT

on

WATER POLLUTION SURVEY

Township of Bucke

Division of Sanitary Engineering

Ontario Water Resources Commission

November 1964

## INTRODUCTION

On November 25, 1964, a water pollution survey was conducted in the Township of Bucke.

The survey was made by the Division of Sanitary Engineering of this Commission. The assistance rendered by the staff of the Timiskaming Health Unit staff in conjunction with the survey is gratefully acknowledged.

## GENERAL

The Township of Bucke is located in the south-east area of the District of Timiskaming along the west shore of Lake Timiskaming.

The township drains to Lake Timiskaming via Dixon and Mill Creeks and their tributaries.

An estimated 750 of the township's 1682 persons live in the Community of North Cobalt. This community is located in the south-east area of the township one mile south of the Town of Haileybury. The survey was centered around this area of the township.

The rough terrain of the township permits only limited use of the area for agricultural purposes. The mining industry in the Township of Coleman is the major employment centre for the North Cobalt residents.

## WATER SUPPLY

Private well supplies were in general use throughout the township. Two public well supplies were available at North Cobalt.

However, adverse water reports during April and May of 1964 deemed these supplies as unsatisfactory for drinking purposes.

In a sanitary survey report, prepared by the Timiskaming Health Unit in 1963 it was reported that most homes in the North Cobalt area were serviced by shallow dug wells. Of 130 wells sampled, 70 were graded doubtful and 28 were unsatisfactory. One case of typhoid fever was reported on February 13, 1964. One of the private wells was suspected but this was not confirmed.

A municipal water works is under active consideration for this community. Three test wells had been drilled in an area north-west of North Cobalt. Number 1 and number 3 wells had reportedly supplied 25 gpm during a pumping period of 12-14 hours. Number 1 well which was flowing at a rate of 4 gpm was sampled during the survey.

#### SANITARY WASTE DISPOSAL

Septic tank systems and outdoor privies are utilized for the disposal of sanitary wastes.

In the above mentioned sanitary survey report it was noted that "Very few satisfactory sewage disposal systems could be found. Many homes had septic tank effluent or sink wastes draining into a nearby ditch or ravine. All these outlets eventually find their way to Mill Creek. It was found that 129 homes had privies, 31 had sinks draining to the ditch, 12 had septic tanks and tile field installations working properly and 41 had septic tanks with a surface outlet".

The frozen conditions at the time of this survey prevented sampling of the area drainage ditches. The clay overburden in the North Cobalt area has prevented the satisfactory function of individual sub-surface disposal systems. Drainage from the North Cobalt area is to Mill Creek.

A municipal sewage system has been proposed for this community. Preliminary approval has been given by this Commission for the system with a lagoon to be located in an oxbow of Mill Creek. The lagoon effluent would be directed to the creek. It was reported that this system would be staged and that work was expected to commence in 1965.

The proposed stages of the municipal water and sewer systems is depicted on the appended map.

#### REFUSE DISPOSAL

The existing refuse disposal area located south of North Cobalt was to be discontinued. This open face dumping area did not appear to represent a water pollution problem.

Property had been acquired for a new refuse disposal site located south of, and adjacent to, the Town of Haileybury refuse disposal area. Refuse was to be dumped into a small ravine, approximately 0.25 miles inland from Lake Timiskaming. This proposed site appeared to be satisfactory.

#### INDUSTRIAL WASTE DISPOSAL

There were no industrial waste problems from industry in the township at the time of this survey.

The only industry of significance to this report was the Wabi Iron Works which was no longer operating.

Tailings from the silver mining industry in the Township of Coleman which are discharged to Cross Lake are suspected to be responsible for the excessive suspended solids concentrations in Mill Creek. The Cross Lake outlet and Mill Creek intersect south of the Townships of Bucke and Coleman boundary.

#### WATER POLLUTION

Lake Timiskaming, reportedly is a tourist attraction in the summer months providing such recreational facilities as swimming, boating and fishing. Several public bathing beaches are located in the Township of Bucke. The results of a routine sampling programme of the beaches by the Timiskaming Health Unit were reported to vary in quality.

The results of samples collected from Mill Creek and Dixon Creek at Lake Timiskaming during this survey were in excess of the coliform concentration objective for surface waters in Ontario. The suspended solids concentration in Mill Creek was also excessive.

#### SAMPLE ANALYSIS

Chemical analyses of samples collected during this survey were performed in the Commission laboratories in Toronto. All bacteriological examinations were made at the Department of



Health Laboratory in Timmins. The results of these samples are appended to this report.

The objectives for all surface waters in Ontario are as follows:

5-day Biochemical Oxygen Demand - not greater than 4 ppm

MF Coliform Count - not greater than 2400 coliforms per  
100 ml of water tested

### DISCUSSION

The excessive coliform concentrations prevailed in samples collected from Mill Creek above and below North Cobalt.

Tailings from the mining industry in the Township of Coleman are believed to be responsible for the high suspended solids concentrations.

The total coliform concentration of 2.2 in the sample collected from the number 2 test well indicates that pollution present is not sufficient to regard the water unfit for drinking. This proposed water supply should be re-sampled.

### SUMMARY & CONCLUSIONS

A water pollution survey was made in the Township of Bucke on November 25, 1964. Adverse weather conditions prevented sampling in many areas during this survey. The Timiskaming Health Unit staff assisted in the investigations. This survey was centered in North Cobalt area.

The lack of good surface drainage, adverse topographical features and extremes of temperature has resulted

in the malfunction of many septic tank disposal systems. This in turn has resulted in unsatisfactory water supplies.

The installation of a municipal water and sewage works to serve this area would not doubt alleviate the waste disposal and water supply problem.

RECOMMENDATION

Negotiations for the installation of a municipal water supply and a sewage disposal system to serve the Community of North Cobalt should be completed without delay.

All of which is respectfully submitted,

District Engineer: \_\_\_\_\_  
H. Browne

Approved by: \_\_\_\_\_  
K. H. Sharpe, Director

Prepared by: W. C. Stevens

ds

MUNICIPALITY: Township of Bucke  
DATE SAMPLED: November 25, 1964

WATERCOURSE: See below  
BY: W.C.Stevens

Lab. No.	5-day BOD	Solids			Total Coliform	M P N Organisms	E.coli
		Total	Susp.	Diss.			
R-5223	0.8	1392	378	1014	43		0
R-5224	3.8	288	45	243	120,000		46,000
R-5225	1.2	786	296	490	--		39+
R-5226	1.6	372	58	314	460		240
R-5227	2.8	384	154	230	11,000		460
R-5228	0.6	294	26	268	4,600		0

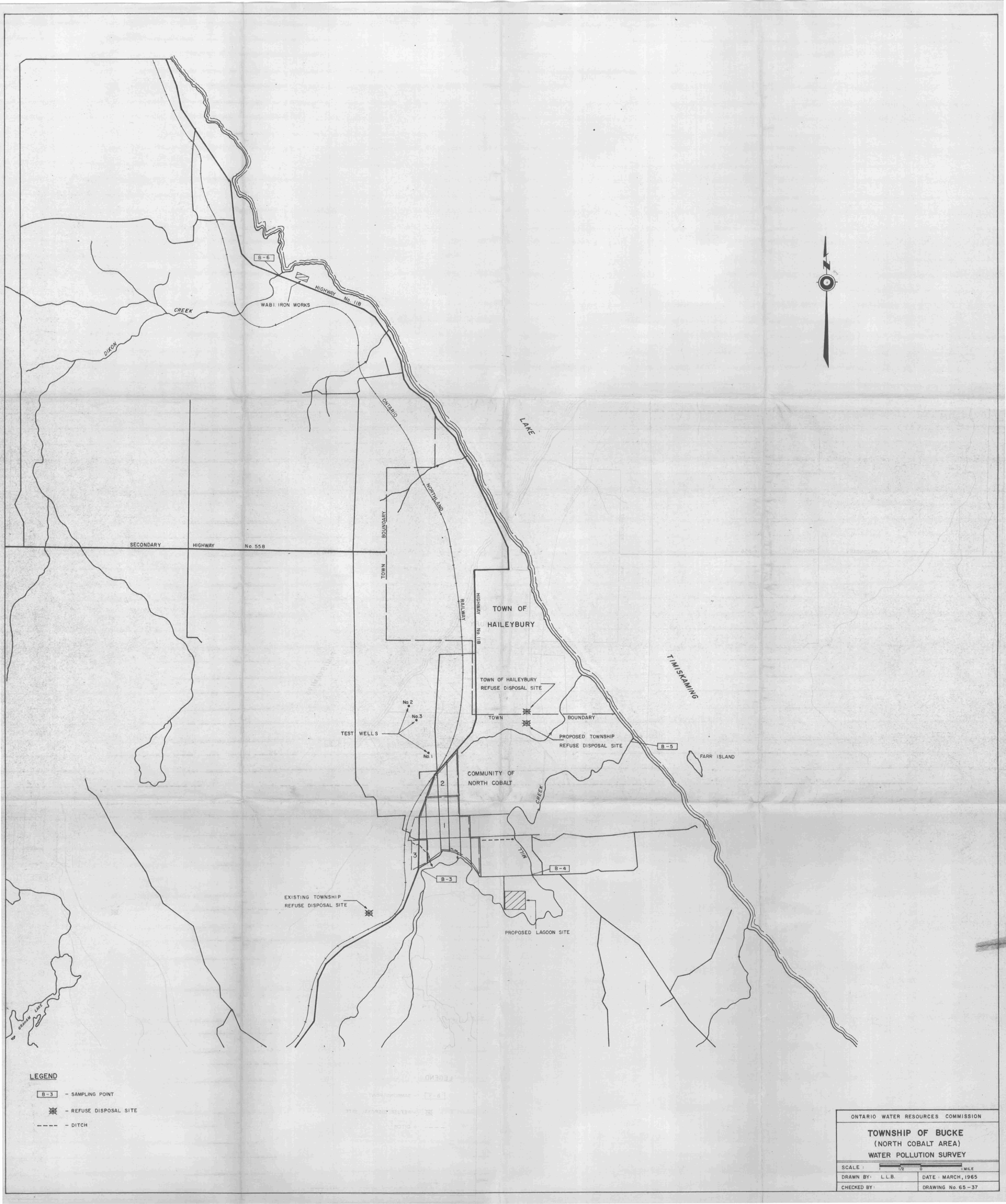
R-5223	B-1	Crosslake from road bridge - Township of Coleman- south of Twp.of Bucke line					
R-5224	B-2	Mill Creek at Hwy.No.11B- at culvert south of Twp.of Bucke line					
R-5225	B-3	Mill Creek at intersection of Mill Creek Rd. & Hwy.No.11B- North Cobalt					
R-5226	B-4	Mill Creek at Mill Creek Rd.bridge - North Cobalt					
R-5227	B-5	Mill Creek below falls - at Lake Timiskaming					
R-5228	B-6	Dixon Creek at east side of Hwy.No.11B- at Lake Timiskaming					

#### WATER ANALYSIS

Lab. No.	Hardness as CaCO <sub>3</sub>	Alkalinity as CaCO <sub>3</sub>	Iron as Fe	Chloride as Cl	pH at lab.	MPN Total Coli- form Organisms	E.coli
W-7502	250	262	0.33	4	7.7	2.2	0

W-7502 No.1 test well - Hamlet of North Cobalt - not chlorinated - Grade "B"





**LEGEND**

B-3 - SAMPLING POINT

✱ - REFUSE DISPOSAL SITE

---- - DITCH